

CURRICULUM VITAE – BENJAMIN HAMILTON

NAME Dr. Benjamin D. Hamlington
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EMPLOYMENT

2020-pres.	Research Scientist IV Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA.
2018-2020	Research Scientist III Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA.
2014-2018	Assistant Professor Ocean, Earth, and Atmospheric Sciences Department, Old Dominion University
2013-2014	Research Scientist II Cooperative Institute for Research in Environmental Sciences, Boulder, CO
2011-2013	Research Associate Colorado Center for Astrodynamics Research, University of Colorado at Boulder
EDUCATION	
2007-2011	Doctor of Philosophy in Aerospace Engineering Sciences University of Colorado at Boulder
2006-2007	Master of Science in Mechanical Engineering Washington University in St. Louis
2002-2007	Bachelor of Science in Aerospace Engineering Washington University in St. Louis

PUBLICATIONS

1. Sweet, W.V., B.D. Hamlington, R.E. Kopp, C.P. Weaver, P.L. Barnard, D. Bekaert, W. Brooks, M. Craghan, G. Dusek, T. Frederikse, G. Garner, A.S. Genz, J.P. Krasting, E. Larour, D. Marcy, J.J. Marra, J. Obeysekera, M. Osler, M. Pendleton, D. Roman, L. Schmied, W. Veatch, K.D. White, and C. Zuzak, (2022) Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines. NOAA Technical Report NOS 01. National Oceanic and Atmospheric Administration, National Ocean Service, Silver Spring, MD, 111 pp.
2. Harvey, T. C., Hamlington, B. D., Frederikse, T., Nerem, R. S., Piecuch, C. G., Hammond, W. C., ... & Boening, C. (2021). Ocean mass, sterodynamic effects, and vertical land motion largely explain US coast relative sea level rise. *Communications Earth & Environment*, 2(1), 1-10.
3. Thompson, P. R., Widlansky, M. J., Hamlington, B. D., Merrifield, M. A., Marra, J. J., Mitchum, G. T., & Sweet, W. (2021). Rapid increases and extreme months in projections of United States high-tide flooding. *Nature Climate Change*, 11(7), 584-590.
4. Johnson, G. C., Lumpkin, R., Alin, S. R., Amaya, D. J., Baringer, M. O., Boyer, T., ... & Zhang, H. M. (2021). Global oceans. *Bulletin of the American Meteorological Society*, 102(8), S143-S198.
5. Cheon, S. H., Hamlington, B. D., Reager, J. T., & Chandanpurkar, H. A. (2021). Identifying ENSO-related interannual and decadal variability on terrestrial water storage. *Scientific Reports*, 11(1), 1-10.
6. Dangendorf, S., Frederikse, T., Chafik, L., Klinck, J. M., Ezer, T., & Hamlington, B. D. (2021). Data-driven reconstruction reveals large-scale ocean circulation control on coastal sea level. *Nature Climate Change*, 11(6), 514-520.
7. Hamlington, B. D., Osler, M., Vinogradova, N., & Sweet, W. V. (2021). Coordinated Science Support for Sea-Level Data and Services in the United States. *AGU Advances*, 2(2), e2021AV000418.
8. Buzzanga, B., Heijkoop, E., Hamlington, B. D., Nerem, R. S., & Gardner, A. (2021). An Assessment of Regional ICESat-2 Sea-Level Trends. *Geophysical Research Letters*, 48(9), e2020GL092327.

9. Chandanpurkar, H. A., Reager, J. T., Famiglietti, J. S., Nerem, R. S., Chambers, D. P., Lo, M. H., ... & Syed, T. H. (2021). The seasonality of global land and ocean mass and the changing water cycle. *Geophysical Research Letters*, 48(7), e2020GL091248.
10. **Hamlington, B. D.**, Frederikse, T., Thompson, P. R., Willis, J. K., Nerem, R. S., & Fasullo, J. T. (2021). Past, Present and Future Pacific Sea Level-Change. *Earth's Future*, 2020EF001839.
11. **Hamlington, B. D.**, Gardner, A. S., Ivins, E., Lenaerts, J. T., Reager, J. T., Trossman, D. S., ... & Willis, M. J. (2020). Understanding of contemporary regional sea-level change and the implications for the future. *Reviews of Geophysics*, 58(3), e2019RG000672.
12. **Hamlington, B. D.**, Piecuch, C. G., Reager, J. T., Chandanpurkar, H., Frederikse, T., Nerem, R. S., ... & Cheon, S. H. (2020). Origin of interannual variability in global mean sea level. *Proceedings of the National Academy of Sciences*, 117(25), 13983-13990.
13. Buzzanga, B., Bekaert, D. P., **Hamlington, B. D.**, & Sangha, S. S. (2020). Toward Sustained Monitoring of Subsidence at the Coast Using InSAR and GPS: An Application in Hampton Roads, Virginia. *Geophysical Research Letters*, 47(18), e2020GL090013.
14. Larour, E., Caron, L., Morlighem, M., Adhikari, S., Frederikse, T., Schlegel, N. J., Ivins, E., **Hamlington, B.**, Kopp, R., Nowicki, S. (2020). ISSM-SLPS: geodetically compliant Sea-Level Projection System for the Ice-sheet and Sea-level System Model v4. 17. *Geoscientific Model Development*, 13(10), 4925-4941.
15. **Hamlington, B. D.**, Frederikse, T., Nerem, R. S., Fasullo, J. T., & Adhikari, S. (2020). Investigating the Acceleration of Regional Sea-level Rise During the Satellite Altimeter Era. *Geophysical Research Letters*, 47(5), e2019GL086528.
16. Cazenave, A., **Hamlington, B.D.**, Horwath, M., Barletta, V. R., Benveniste, J., Chambers, D., ... & Meyssignac, B. (2019). Observational requirements for long-term monitoring of the global mean sea level and its components over the altimetry era. *Frontiers in Marine Science*, 6(SEP).
17. Piecuch, C. G., Thompson, P. R., Ponte, R. M., Merrifield, M. A., & **Hamlington, B. D.** (2019). What Caused Recent Shifts in Tropical Pacific Decadal Sea-Level Trends?. *Journal of Geophysical Research: Oceans*, 124(11), 7575-7590.
18. **Hamlington, B. D.**, Fasullo, J. T., Nerem, R. S., Kim, K. Y., & Landerer, F. W. (2019). Uncovering the Pattern of Forced Sea Level Rise in the Satellite Altimeter Record. *Geophysical Research Letters*, 46(9), 4844-4853
19. **Hamlington, B. D.**, Reager, J. T., Chandanpurkar, H., & Kim, K. Y. (2019). Amplitude Modulation of Seasonal Variability in Terrestrial Water Storage. *Geophysical Research Letters*, 46(8), 4404-4412.
20. **Hamlington, B. D.**, Cheon, S. H., Piecuch, C. G., Karnauskas, K. B., Thompson, P. R., Kim, K. Y., & Frederikse, T. (2019). The dominant global modes of recent internal sea level variability. *Journal of Geophysical Research: Oceans*, 124(4), 2750-2768.
21. Kim, K. Y., Kim, J. Y., Kim, J., Yeo, S., Na, H., **Hamlington, B. D.**, & Leben, R. R. (2019). Vertical Feedback Mechanism of Winter Arctic Amplification and Sea Ice Loss. *Scientific reports*, 9(1), 1184.
22. Burgos, A.G., **B.D. Hamlington**, P.R. Thompson, R.D. Ray, 2018: Future Nuisance Flooding in Norfolk, VA, from Astronomical Tides and Annual to Decadal Internal Climate Variability, *Geophys. Res. Lett.*, 45(22), 12,432-12,439.
23. Cheon, S.H., **B.D. Hamlington**, K.D. Suh, 2018: Reconstruction of sea level around Korean Peninsula using cyclostationary empirical orthogonal functions, *Ocean Science*, 14(15), 959-970.
24. **Hamlington, B.D.**, A. Burgos, P.R. Thompson, F.W. Landerer, C.G. Piecuch, S. Adhikari, L. Caron, J.T. Reager, E.R. Ivins, 2018: Observation-Driven Estimation of Spatial Variability of 20th Century Sea Level Rise, *Jour. Geophys. Res. Oceans*, 123 (3), 2129-2140.
25. Nerem, R.S., B.D. Beckley, J.T. Fasullo, **B.D. Hamlington**, D. Masters, 2018: Climate-change-driven accelerated sea-level rise detected in the altimeter era, *PNAS*, 201717312.
26. Carson, M., A. Koehl, D. Stammer, B. Meyssignac, J.A. Church, J. Schroeter, M. Wenzel, **B.D. Hamlington**, 2017: Regional sea level variability and trends, 1960-2007 – A comparison of sea level reconstructions and ocean syntheses, *Jour. Geophys. Res. Oceans*, 122(11), 9068-9091.
27. Bekaert, D., **B.D. Hamlington**, B. Buzzanga, C.E. Jones, 2017: Spaceborne Synthetic Aperture Radar Survey of Subsidence in Hampton Roads Virginia, *Scientific Reports*, 7(1), 14752.

28. Nidheesh, A.G., M. Lengaigne, J. Vialard, T. Izumo, A. Unnikrishnan, B. Meyssignac, **B.D. Hamlington**, C. Montegut, 2017: Robustness of observationally-derived decadal sea-level variability in the Indo-Pacific region, *Geophys. Res. Letter*, 44(14), 7391–7400.
29. **Hamlington, B.D.** J.T. Reager, M.H. Lo, K. Karnauskas, R.R. Leben, 2017: Separating global water cycle variability from sea level rise, *Scientific Reports*, 7.
30. Han, W., G.A. Meehl, D. Stammer, A. Hu, **B.D. Hamlington**, J. Kenigson, H. Palanisamy, and P.R. Thompson. 2017: Spatial Patterns of Sea Level Variability Associated with Natural Internal Climate Modes. *Surveys in Geophysics*, 38(1), 217–250.
31. Mason, S., P.E. Hamlington, B.D. Hamlington, W. Jolly, C. Hoffman, 2017: Effects of Climate Oscillations on Wildland Fire Potential in the Continental United States, *Geophys. Rese. Lett.*, 44, 7002–7010.
32. Thompson, P. R., **B. D. Hamlington**, F. W. Landerer, and S. Adhikari 2016: Are long tide gauge records in the wrong place to measure global mean sea level rise?, *Geophys. Res. Lett.*, 43, 10,403–10,411,
33. **Hamlington, B. D.**, P.R. Thompson, W. C. Hammond, G. Blewitt, and R. D. Ray, 2016: Assessing the impact of vertical land motion on twentieth century global mean sea level estimates, *J. Geophys. Res. Oceans*, 121, 4980–4993.
34. **Hamlington, B. D.**, S. H. Cheon, P. R. Thompson, M. A. Merrifield, R. S. Nerem, R. R. Leben, and K.-Y. Kim, 2016: An ongoing shift in Pacific Ocean sea level, *J. Geophys. Res. Oceans*, 121, 5084–5097.
35. Fasullo, J. T., R. S. Nerem, and **B.D. Hamlington**. 2016: Is the Detection of Accelerated Sea Level Rise Imminent? *Scientific Reports* 6 (August): 31245.
36. Kim, K.-Y., **B. D. Hamlington**, H. Na, and J. Kim. 2016: Mechanism of Seasonal Arctic Sea Ice Evolution and Arctic Amplification. *The Cryosphere* 10 (5). Katlenburg-Lindau, Germany: Copernicus GmbH: 2191–2202.
37. Cheng, Y., T. Ezer, and **B.D. Hamlington**. 2016: Sea Level Acceleration in the China Seas. *WATER* 8 (7). Multidisciplinary Digital Publishing Institute: 293.
38. Cheng, Y., **B.D. Hamlington**, H.P. Plag, and Q. Xu. 2016: Influence of ENSO on the Variation of Annual Sea Level Cycle in the South China Sea. *Ocean Engineering* 126 (November): 343–52.
39. Merrifield, M.A., Leuliette, E., Thompson, P., Chambers, D., **Hamlington, B.D.**, Jevrejeva, S., Marra, J.J., Menéndez, M., Mitchum, G.T., Nerem, R.S., Sweet, W.A.; Swart, W. 2016: Sea level variability and change [in “State of the Climate in 2015”]. *Bulletin of the American Meteorological Society*, 97 (8 (Supplement)). S80-S82.
40. Cheng, Y., H.P. Plag, **B. D. Hamlington**, Qing X., and Y. He. 2015: Regional Sea Level Variability in the Bohai Sea, Yellow Sea, and East China Sea.” *Continental Shelf Research* 111, Part A (December): 95–107.
41. **Hamlington, B. D.**, Leben, R.R., Kim, K.-Y., Nerem, R.S., Atkinson, L.P., Thompson, P.R. 2015: The effect of the El Niño-Southern Oscillation on U.S. regional and coastal sea level, *J. Geophys. Res. Oceans*, 120, 3970–3986.
42. **Hamlington, B. D.**, and P. R. Thompson, 2015: Considerations for estimating the 20th century trend in global mean sea level. *Geophys. Res. Lett.*, 42, 4102–4109.
43. **Hamlington, B. D.**, R. F. Milliff, H. van Loon, and K.-Y. Kim, 2015: A Southern Hemisphere sea level pressure-based precursor for ENSO warm and cold events, *J. Geophys. Res. Atmos.*, 120, 2280–2292,
44. **Hamlington, B. D.**, P. E. Hamlington, S. G. Collins, S. R. Alexander, and K.-Y. Kim, 2015: Effects of climate oscillations on wind resource variability in the United States, *Geophys. Res. Lett.*, 42, 145–152.
45. Kim, K.-Y., B.D. Hamlington, and H. Na. 2015: Theoretical Foundation of Cyclostationary EOF Analysis for Geophysical and Climatic Variables: Concepts and Examples. *Earth-Science Reviews* 150 (November): 201–18.
46. Strassburg, M.W., **Hamlington, B.D.**, Leben, R.R., Kim, K.-Y., 2014: Sea Level Trends in the South East Asian Seas, *Clim. Past*, 10(5), 4129-4148.
47. **Hamlington, B.D.**, Strassburg, M.W., Leben, R.R., Han, W., Nerem, R.S., Kim, K.-Y., 2014: Uncovering an anthropogenic sea-level rise signal in the Pacific Ocean, *Nat. Clim. Change*, 4, 782-785.

48. Strassburg, M.W., **Hamlington B.D.**, Leben, R.R., Kim, K.-Y., 2014: A comparative study of sea level reconstruction techniques using 20 years of satellite altimetry data, *Jour. of Geophys. Res.*, **119**, 7, 4068-4082.
49. **Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Kim, K.-Y., 2014: Cyclostationary Empirical Orthogonal Function Sea Level Reconstruction, *Geosci. Data Jour.*, 1:13-19.
50. Merrifield, M.A., Thompson, P., Leuliette, E., Nerem, R.S., **Hamlington, B.D.**, Chambers, D.P., Mitchum, G.T., McInnes, K., Marra, J.J., Menéndez, M., Sweet, W. 2014: [Global oceans] Sea level variability and change [in "State of the Climate in 2013"]. *Bull. Amer. Meteor. Soc.*, **95** (7), S71-S73.
51. **Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Nerem, R.S., Kim, K.-Y., 2013: Contribution of the Pacific Decadal Oscillation to Global Mean Sea Level Trends, *Geophys. Res. Lett.*, **40**, 50950.
52. Han, W., Meehl, G.A., Hu, A., Alexander, M.A., Yamagata, T., Yuan, D., Ishii, M., Pegion, P., Zheng, J., **Hamlington, B.D.**, Quan, X-W., Leben, R.R., 2013: Intensification of Decadal and Multi-Decadal Sea Level Variability in the Western Tropical Pacific During Recent Decades, *Clim. Dyn.*, DOI: 10.1007/s00382-013-1951-1.
53. **Hamlington, B.D.**, Leben, R.R., Wright, L.A., Kim, K.-Y., 2012: Regional Sea Level Reconstruction in the Pacific Ocean, *Marine Geodesy*, **35**, 98-117.^[1]
54. **Hamlington, B.D.**, Leben, R.R., Kim, K.-Y., 2012: Improving Sea Level Reconstructions Using Non-Sea Level Measurements, *Jour. Geophys. Res.*, **117**, C10025.
55. **Hamlington, B.D.**, Leben, R.R., Godin, O.A., Gica, E., Titov, V.V., Haines, B.J., Desai, S.D., 2012: Could Satellite Altimetry Have Improved Early Detection and Warning of the 2011 Tohoku Tsunami?, *Geophys. Res. Lett.*, **39**, L15605.^[1]
56. Leben, R.R., **Hamlington, B.D.**, Haines, B.J., 2012: SEASAT and GEOSAT revisited: using sea level measurements to improve satellite altimeter orbits, *Jour. of Astro. Sci.*, **58**:3.
57. **Hamlington B.D.**, Leben R.R., Nerem R.S., Han, W., Kim K.-Y., 2011: Reconstructing sea level using cyclostationary empirical orthogonal functions, *Jour. Geophys. Res.*, **116**, C12015.
58. **Hamlington B.D.**, Leben, R.R., Godin, O.A., Legeais, J.F., Gica, E., Titov, V.V., 2011: Detection of 2010 Chilean tsunami using satellite altimetry, *Nat. Hazards Earth Syst. Sci.*, **11**, 2391-2406.
59. **Hamlington B.D.**, Leben R.R., Nerem R.S., Kim K.-Y., 2011: The effect of signal-to-noise ratio on the study of sea level trends, *J. Climate*, **24**, 1396-1408.^[1]
60. Godin O.A., Irisov V.G., Leben R.R., **Hamlington B.D.**, Wick G.A. 2009: Variations in sea surface roughness induced by the 2004 Sumatra-Andaman tsunami, *Nat. Hazards Earth Syst. Sci.*, **9**, 1135-1147.
61. Chen X.M., **Hamlington B.D.**, Shen A.Q. 2008: Isotropic-to-nematic phase transition in a liquid-crystal droplet, *Langmuir*, **24**:2, 541-546.
62. **Hamlington B.D.**, Steinhaus B, Feng J, Link D, Shelley M and Shen A Q. 2007: Liquid crystal droplet production in a microfluidic device, *Liquid Crystals*, **34**:7, 861-870.^[1]
63. Shen A Q, **Hamlington B.D.**, Pickard W, Knoblauch M & Peters W. 2006: Forisome based biomimetic smart materials, *Smart Structures and Systems, An Int. Journal*, **2**:3, 225-236.

HONORS

- NASA JPL Lew Allen Award, 2020
 NASA Early Career Public Achievement Medal, 2019
 COSPAR Zeldovich Medal, 2018
 NASA Sea Level Change Science Team Lead, 2017-Present
 Early Career Distinguished Research Award, 2016, Old Dominion University
 Aerospace Engineering Sciences Outstanding Dissertation, 2011
 University of Colorado Aerospace Engineering Sciences Department Fellowship, 2007
 Alexander Langsdorf Merit Scholarship, Washington University in St. Louis, 2002-2007

PROFESSIONAL ACTIVITIES

- Chapter Author, 5th National Climate Assessment
 Member of WCRP Lighthouse Activity on Sea Level, 2021-Present
 Member of WCRP Grand Challenge on Sea Level, 2020-present

Member of the Interagency Sea Level Task Force, 2019-present
Member of the USGCRP Coasts Group, 2020-present
Member of USCRP, 2020-present
Member of U.S. Government Review Panel for IPCC WG1 AR6
Member of NASA GRACE-FO Science Team, 2019-present
Member of NASA Sea Level Rise Science Team, 2014-present
Member of NASA Ocean Surface Topography Science Team, 2011-present
Session organizer for 2016 AAAS Meeting
Session Chair for 2014, 2015, 2016, 2017, 2018 Fall AGU Meeting
Session Chair for 2014, 2016 Ocean Sciences Conference
Review Panel NASA Physical Oceanography, NASA Sea Level Change Team
Reviewer for Science, Nature, Nature Climate Change, Nature Energy, Nature Geoscience, Geophysical Review Letters, Journal of Climate, Journal of Geophysical Research, Marine Geodesy, Natural Hazards and Earth System Science

BOOK CHAPTERS

Hamlington, B.D., Godin, O.A., Irisov, V.G., Leben, R.R., 2010: Detection of tsunamis from changes in ocean surface roughness, "Tsunami, Research and Technologies", INTECH, Austria, 2011.

CONFERENCE PROCEEDINGS^[1]

Hamlington, B.D., Leben, R.R., Kim,K.-Y., 2013: Contribution of Pacific Decadal Oscillation to Regional Sea Level, Regional Climate Modeling Conference II, Busan, South Korea.
Hamlington B.D., Leben R.R., Kim K.-Y. 2012: Improving Sea Level Reconstructions Using Non-Sea Level Measurements, Proceedings of Oceans 2012 MTS/IEEE..
Hamlington B.D., Leben R.R., Kim K.-Y. 2012: An Integrated Approach to Reconstructing Sea Level, Proceedings of 20 Years of Progress in Radar Altimetry.
Hamlington B.D., Leben R.R., 2012: Sea Level Education for Underrepresented Students Through Collaboration with CABPES, Proceedings of 20 Years of Progress in Radar Altimetry.
Hamlington B.D., Leben R.R., Kim K.-Y. 2012: Advances in Climate Monitoring Using a Consistent Sea Level Record, Proceedings of 20 Years of Progress in Radar Altimetry.
Hamlington, B.D., Godin, O.A., Irisov, V.G., Leben, R.R., 2010: On the feasibility of tsunami detection using satellite-based sea surface roughness measurements, Proceedings of 2010 IEEE International Geoscience and Remote Sensing Symposium, 3035-3038.^[1]

PRESENTATIONS

KEYNOTE:

Hamlington, B.D., Understanding Sea Level Rise with Remote Sensing, Virginia Space Grant Annual Reception, Apr. 2018.
Hamlington, B.D., What do we really know about 20th Century GMSL? NASA Ocean Surface Topography Team Meeting, Reston, VA, Oct. 2015.

INVITED:

Hamlington, B.D., Mapping the Causes and Impacts of Decadal Sea Level Variability, AGU Fall Meeting, San Francisco, USA, Dec. 2016.
Hamlington, B.D., Vertical Land Motion and Sea Level Rise, NASA Sea Level Science Team Meeting, Lake Arrowhead, CA, Oct. 2015.
Hamlington, B.D., Multivariate Sea Level Reconstruction 1900-2014, NASA Ocean Surface Topography Team Meeting, Reston, VA, Oct. 2015.
Hamlington, B.D., Sea Level Science and Projections, ACCO Climate Resiliency Workshop, Washington DC, June, 2015.

- Hamlington, B.D.**, Towards Regional Sea Level Projections: Assessing the impact of internal variability on sea level, University of South Carolina Seminar, Columbia, SC, February, 2015.
- Hamlington, B.D.**, Towards Regional Sea Level Projections: Assessing the impact of internal variability on sea level, University of South Florida Seminar, St. Petersburg, FL, March, 2015.
- Hamlington, B.D.**, Towards Regional Sea Level Projections: Assessing the impact of internal variability on sea level, Old Dominion University, OEAS Seminar, Norfolk, VA, April, 2015.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y., CSEOF-based Sea Level Height Reconstruction, International Conference on Coastal Engineering, Seoul, South Korea, June, 2014.
- Hamlington, B.D.**, Cyclostationary Empirical Orthogonal Function Analysis: Theory and Applications, Boulder Fluids Seminar, Boulder, USA, February, 2014.
- Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Nerem, R.S. Kim, K.-Y., Pacific Decadal Oscillation Influence on Global and Regional Sea Level, AGU Fall Meeting, San Francisco, USA, Dec., 2013.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y., Contribution of Pacific Decadal Oscillation to Regional Sea Level, Regional Climate Modeling Conference II, Busan, South Korea, Sept., 2013.
- Hamlington, B.D.**: Tsunami Detection Using Satellite Altimetry, International Workshop on Coastal Altimetry, Bogor, Indonesia, Nov. 2012.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y.: Improving Sea Level Reconstructions Using non-sea Level Measurements, ATOC Department Seminar, University of Colorado, Oct. 2012.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y.: Reconstructing Sea Level Using Non-Sea Level Measurements, Meteorology Department Seminar, Seoul National University, Aug. 2012.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y.: Reconstructing Sea Level Using CSEOFs, Meteorology Department Seminar, Seoul National University, Sep. 2011.
- Hamlington, B.D.**: Reconstructing Sea Level Using CSEOFs, ATOC Department Seminar, University of Colorado, Sep. 2011.
- Hamlington B.D.**, Leben, R.R., Nerem, R.S., Kim K.-Y.: Using CSEOF analysis to improve estimates of the spatial variation of sea level trends, Meteorology Department Seminar, Seoul National University, Sep. 2010.
- Hamlington B.D.**, Leben, R.R., Nerem R.S., Kim K.-Y.: Reconstructing sea level using satellite altimetry and tide gauges, OCCAPA Sea Level Workshop, Seoul National University, Sep. 2010.
- Hamlington B.D.**, Leben R.R., Godin O.A., Irisov V.G.: Detection of tsunamis from changes in ocean surface roughness, AGU Ocean Sciences Meeting, Portland, OR, USA, Feb. 2010.
- Hamlington B.D.**, Leben R.R., Nerem R.S., Kim K.-Y.: New method for reconstructing sea level from tide gauges using satellite altimetry, IEEE International Geoscience and Remote Sensing Symposium, Honolulu, HI, USA, July 2010.
- Hamlington B.D.**, Leben R.R., Godin O.A., Irisov V.G.: On the feasibility of tsunami detection using satellite-based sea surface roughness measurements, IEEE International Geoscience and Remote Sensing Symposium, Honolulu, HI, USA, July 2010.

AS PRESENTER:

- Hamlington, B.D.**, The NASA Sea Level Change Team and Challenges of Generating Useful Sea Level Information, Ocean Sciences Meeting, San Diego, CA, USA, Feb. 2020.
- Hamlington, B.D.**, Extension of Satellite-Measured Terrestrial Water Storage for Longer-Term Water Cycle Studies, Fall AGU, San Francisco, CA, USA, Dec. 2019.
- Hamlington, B.D.**, NASA Sea Level Change Team: Recent Findings and Developments, Fall AGU, San Francisco, CA, USA, Dec. 2019.
- Hamlington, B.D.**, Recent Findings and Tools from the NASA Sea Level Change Team, Fall AGU, Washington DC, USA, Dec. 2018.
- Hamlington, B.D.**, Uncovering Long-term Regional Trends in the Satellite Altimeter Record, Fall AGU, Washington DC, USA, Dec. 2018.
- Hamlington, B.D.**, Understanding and Communicating the Timescales of Sea Level Change, AAAS Meeting, Washington DC, USA, Feb. 2016.
- Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Han, W., Nerem, R.S. Kim, K.-Y. Uncovering an

- Anthropogenic Sea Level Rise Signal in the Pacific Ocean, AGU Fall Meeting, San Francisco, USA, Dec. 2014.
- Hamlington, B.D.**, Leben, R.R., Near Real-time and Historical Monitoring of the Earth's Climate System Using Satellite Altimetry and Reconstructed Sea Level, Ocean Surface Topography Science Team, Konstanz, Germany, Oct. 2014.
- Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Han, W., Nerem, R.S. Kim, K.-Y. Uncovering an Anthropogenic Sea Level Rise Signal in the Pacific Ocean, Ocean Surface Topography Science Team, Konstanz, Germany, Oct. 2014.
- Hamlington, B.D.**, Leben, R.R., Sea Level and Climate Change Outreach for High School Students, Ocean Surface Topography Science Team Meeting, Konstanz, Germany, Oct. 2014.
- Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Nerem, R.S. Kim, K.-Y., Climate Variability Contributions to Global and Regional Sea Level, Ocean Sciences Meeting, Honolulu, USA, Feb., 2014.
- Hamlington, B.D.**, Leben, R.R., Strassburg, M.W., Nerem, R.S. Kim, K.-Y., Pacific Decadal Oscillation Contribution to Global and Regional Sea Level, Ocean Surface Topography Science Team Meeting, Boulder, USA, Oct. 2013.
- Hamlington, B.D.**: Early Warning and Detection of Tsunami Using Remote Sensing, ATOC Department Seminar, University of Colorado, Oct. 2013.
- Hamlington, B.D.**, Leben, R.R., Godin, O.A., Gica. E., Titov. V.V., Haines, B.J., Desai, S.D., Could Satellite Altimetry Have Improved Early Detection and Warning of the 2011 Tohoku Tsunami?, RESELECASEA Project, Bogor, Indonesia, Nov. 2012.
- Hamlington B.D.**, Leben R.R., Kim K.-Y: Improving Sea Level Reconstructions Using Non-Sea Level Measurements, Oceans 2012 MTS/IEEE, Virginia Beach, USA, Oct. 2012.
- Hamlington, B.D.**, Leben, R.R., Godin, O.A., Gica. E., Titov. V.V., Haines, B.J., Desai, S.D., Could Satellite Altimetry Have Improved Early Detection and Warning of the 2011 Tohoku Tsunami?, Ocean Surface Topography Science Team Meeting, Venice, Italy, Sep. 2012.^[1]
- Hamlington, B.D.**, Leben, R.R.: Sea level education through collaboration with CABPES, 20 Years of Progress in Radar Altimetry, Ocean Surface Topography Science Team Meeting, Venice, Italy, Sep. 2012.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y.: Improving Sea Level Reconstructions Using non-sea Level Measurements, 20 Years of Progress in Radar Altimetry, Venice, Italy, Sep. 2012.^[1]
- Hamlington, B.D.**, Leben, R.R., Godin, O.A., Gica. E., Titov. V.V., Haines, B.J., Desai, S.D.: Could Satellite Altimetry Have Improved Early Detection and Warning of the 2011 Tohoku Tsunami?, Ocean surface topography science team meeting, Venice, Italy, Sep. 2012.^[1]
- Hamlington, B.D.**, Leben, R.R.: Sea level education through collaboration with CABPES, 20 Years of Progress in Radar Altimetry, Venice, Italy, 2012.
- Hamlington, B.D.**, Leben, R.R., Kim, K.-Y.: Improving Sea Level Reconstructions Using non-sea Level Measurements, AGU Ocean Sciences Meeting, Salt Lake City, UT, USA, Feb. 2012.^[1]
- Hamlington B.D.**, Leben, R.R., Nerem R.S., Phillips T., Kim K.-Y.: Reconstructing global mean sea level from tide gauges using satellite altimetry, Ocean surface topography science team meeting, Lisbon Portugal, Oct. 2010.^[1]
- Hamlington B.D.**, Feng J, Link D, Shelley M, Shen A. Liquid crystal droplet production in a microfluidic device. American Physical Society Conference, Division of Fluid Dynamics. Tampa, November 2006.
- Hamlington B.D.**, Shen A, Feng, J, Link D. Liquid crystal droplet formation inside a microdevice. American Physical Society Conference, Division of Fluid Dynamics. Chicago, November 2005.^[1]
- Hamlington B.D.**, Shen A, Pickard W, Peters W. Smart plant protein inside microdevices. American Physical Society Conference, Division of Fluid Dynamics. Seattle, November 2004.

TEACHING EXPERIENCE

OEAS 108N, Introduction to Global Climate Change: Introductory course for non-science majors, teaching the science basics of climate change. Includes lab.

- OEAS 220T, Introduction to Meteorology:** Introductory course for non-science majors, covering the basics of meteorology, with specific focus on the role technology plays. Includes lab.
- OEAS 895, Introduction to Ocean Remote Sensing:** Graduate level course on the use of satellite remote sensing in studying the ocean.
- OEAS 704: Time Series Analysis:** Graduate level course on the basic techniques of time series analysis. These include temporal spatial and frequency/wave number domain techniques.
- OEAS 406/506, Introduction to MATLAB:** Introductory course on MATLAB covering basics of using the program, and introducing simple data analysis concepts.
- OEAS 695, Multidisciplinary Approaches to Regional and Global Sea Level Change:** Graduate level course, covering wide range of topics in sea level science.
- Cyclostationary Empirical Orthogonal Short Course, 2014, Seoul, South Korea:** Provided workshop as part of a three-person team to help scientists and engineers understand the application of CSEOF analysis.
- Colorado Association for Black Professional Engineers and Scientists, 2011-present: Sea Level Course:** Provide weekly two-hour classes on climate and sea level science to underrepresented and underprivileged high school students in Denver, Colorado.
- University of Colorado at Boulder, 2009-2010: ASEN5307 Engineering Data Analysis:** Served as course assistant, created homework and exam questions, provided help for students by answering course content questions, gave lecture in professor's absence.
- Washington University in St. Louis, 2006-2007: Fluid Mechanics Laboratory:** Conducted weekly laboratory sessions and provided help sessions to students.
- Washington University in St. Louis, 2006-2007: Thermodynamics:** Served as head teaching assistant and grader, provided weekly help sessions.
- Washington University in St. Louis, 2005-2007: Engineering Mathematics :** Served as head teaching assistant, provided weekly help sessions and assisted in writing homework questions.
- Washington University in St. Louis, 2004-2007: Probability and Statistics for Engineering:** Served as teaching assistant, held office hours and provided help to students on course content questions. Graded homework problems and exams. Lectured in professor's absence.